



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

October 21, 2003

Christopher B. Fisher, Esq.  
Cuddy & Feder LLP  
90 Maple Avenue  
White Plains, NY 10601-5196

RE: **TS-AT&T-078-030925** - AT&T Wireless PCS LLC request for an order to approve tower sharing for a proposed telecommunications facility to be constructed at 230 Clover Mill Road, Mansfield, Connecticut.

Dear Attorney Fisher:

At a public meeting held October 14, 2003, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated September 24, 2003.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.  
Chairman

PBK/laf

c: Honorable Elizabeth Patterson, Mayor, Town of Mansfield  
Gregory Padick, Town Planner, Town of Mansfield



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Or Counsel  
ANDREW A. GLICKSON (also CT)  
ROBERT L. OSAR (also TX)  
MARYANN M. PALERMO  
ROBERT C. SCHNEIDER

October 15, 2003

VIA FACSIMILE

Mr. Michael Perrone

Siting Analyst

Connecticut Siting Council

10 Franklin Square

New Britain, Connecticut 06051

RE: TS-AT&T-078-030925

Tower Sharing Request by AT&T Wireless

Municipal Tower Facility

230 Clover Mill Road, Mansfield, Connecticut

Dear Mr. Perrone:

Per your request, the latitude and longitude coordinates for the referenced site are as follows:

Latitude: 41°-46'-32.88" N

Longitude: 72°-13'-21.08" W.

If you need any additional information, do not hesitate to contact me.

Sincerely,

  
Lucia Chiochio



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SEP 25 2003

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NORWALK, CONNECTICUT

**TS-AT&T-078-030925**

September 24, 2003

**VIA FEDERAL EXPRESS**

Hon. Pamela B. Katz, Chairman and Members  
of the Siting Council  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

Re: Tower Sharing Request by AT&T Wireless  
Municipal Tower Facility  
230 Clover Mill Road, Mansfield, Connecticut

Hon. Pamela B. Katz, Chairman and Members of the Siting Council:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50aa, AT&T Wireless PCS LLC, by and through its agent AT&T Wireless Services, Inc., ("AT&T") hereby requests an order from the Connecticut Siting Council (the "Council") to approve the proposed shared use of a municipal communications tower to be built by TCP Communications ("TCP") and located at 230 Clover Mill Road in the Town of Mansfield (the "Clover Mill Road Tower Facility"). It is our understanding from TCP representatives that they have completed and executed an agreement with the Town to build a 180' municipal communications tower which will be owned by the Town of Mansfield and used for Town Fire, EMS, Police and Department of Public Works services. We also understand that the tower has recently received local zoning approvals from the Town. See local zoning approval annexed as Exhibit A.

September 24, 2003

Page 2

The Clover Mill Road Tower Facility

The Clover Mill Road Tower Facility will consist of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment, which will be used for emergency and other communications by the municipality. The Facility will be located on property owned by the Town and already used by the Mansfield Department of Public Works.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Dewberry-Goodkind, Inc., including a site layout plan and tower elevation of the Clover Mill Road Tower Facility, AT&T Wireless proposes shared use of the Facility to provide FCC licensed services. AT&T Wireless will install 6 panel antennas at approximately the 168 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) located on a concrete pad within the fenced compound.

Connecticut General Statutes § 16-50aa provides that, upon written request for shared use approval, an order approving such use shall be issued, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns." (C.G.S. § 16-50aa(c)(1).) Further, upon approval of such shared use, it is exclusive and no local zoning or land use approvals are required C.G.S. § 16-50x. Shared use of the Clover Mill Road Tower Facility satisfies the approval criteria set forth in C.G.S. § 16-50aa as follows:

- A. Technical Feasibility As evidenced in the letter of structural integrity prepared by Dewberry-Goodkind, Inc., annexed hereto as Exhibit B, AT&T has confirmed that the tower has been designed to structurally support the Town's and AT&T's antennas, as well as other future carriers. The proposed shared use of this Tower is therefore technically feasible.
- B. Legal Feasibility Pursuant to C.G.S. § 16-50aa, the Council has been authorized to issue an order approving shared use of the Clover Mill Road Tower Facility. (C.G.S. § 16-50aa(c)(1)). Under the authority vested in the Council by C.G.S. § 16-50aa, an order by the Council approving the shared use of a tower would permit AT&T to obtain a building permit for its proposed installation on the Tower.

September 24, 2003

Page 3

- C. Environmental Feasibility The proposed shared use would have a minimal environmental effect, for the following reasons:
1. The proposed installation would have a de minimis visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the approved facility;
  2. The proposed installation by AT&T Wireless would not increase the height of the Tower nor extend the site boundaries;
  3. The proposed installation would not increase the noise levels at the existing facility boundaries by six decibels or more;
  4. Operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. The "worst case" exposure calculated for the operation of this facility for all carriers, would be approximately 0.92% of the standard. See Cumulative Emissions Compliance Report dated April 7, 2003, prepared by Galen Belen, RF Engineer, annexed hereto as Exhibit C;
  5. The proposed shared use of the Clover Mill Road Tower Facility would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. Further, the installation will not generate any traffic other than for periodic maintenance visits.
- D. Economic Feasibility The Applicant has entered into a mutual agreement to share use of the Clover Mill Road Tower Facility on terms agreeable to the parties. The proposed tower sharing is therefore economically feasible.
- E. Public Safety As stated above and evidenced in the Cumulative Emissions Compliance Report annexed hereto as Exhibit C, the operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. Further, the addition of AT&T Wireless' telecommunications service in the Mansfield area is expected to enhance the safety and welfare of local residents and travelers through the area resulting in an improvement to public safety in this area of Mansfield.

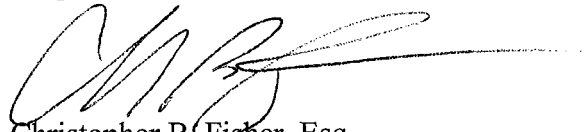
September 24, 2003

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Conclusion

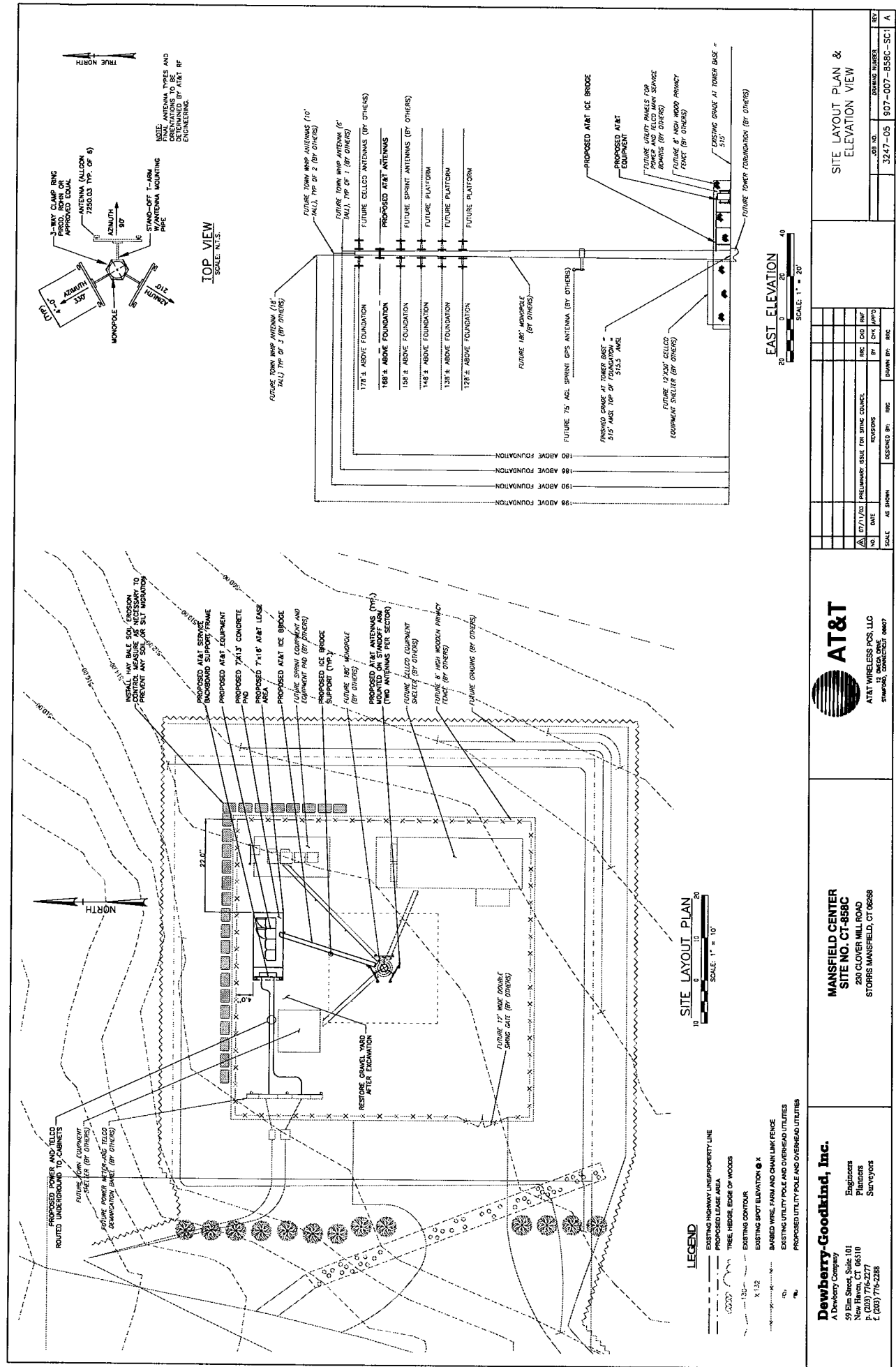
As delineated above, the proposed shared use of the Clover Mill Road Tower Facility satisfies the criteria set forth in C.G.S. § 16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of towers in the State of Connecticut. AT&T Wireless therefore requests the Siting Council issue an order approving shared use of the proposed Facility.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'CBF', with a long horizontal flourish extending to the right.

Christopher B. Fisher, Esq.  
On behalf of AT&T Wireless

cc: Elizabeth C. Paterson, Mayor  
Martin Berliner, Town Manager  
Gregory Paddick, Town Planner  
Wendell Davis, Esq.





TOWN OF MA

Planning and Zoning

Audrey P. Beck  
Four South Ragle  
Storrs, Connecticut 06268  
Telephone (203) 429-3330

Wendell  
Davis

Memo to: Town Council  
From: Planning and Zoning Commission  
A. H. Bartlett, Chairman *AHB/jmk*  
Date: 9/17/03

Re: PZC approval of proposed telecommunication tower and related facilities adjacent to Town Garage,  
PZC file 1209

At a meeting held on September 15, 2003, the Mansfield Planning and Zoning Commission unanimously adopted the following motion:

"to approve with conditions the special permit application (file 1209) of the Town of Mansfield and TCP Communications, Inc. for a 180-foot telecommunication tower and related facilities and site work to be located at 230 Clover Mill Road, in the RAR-90 zone, as submitted to the Commission and shown on plans revised through 6/5/03 and as presented at Public Hearing on 8/4/03. This approval is granted because the application as hereby approved is considered to be in compliance with Article V, Section B, Article X, Section R, and other provisions of the Mansfield Zoning Regulations, and is granted with the following conditions:

1. This approval is based on submitted plans and project descriptions. Any change in plans or the proposed use of the site shall require further review and approval as per Mansfield's Zoning Regulations. The applicant shall be responsible for meeting Building Permit requirements and complying with all applicable State and Federal regulations pertaining to the subject telecommunication use.
2. Prior to any use of the telecommunication facilities and the issuance of a Certificate of Compliance, all site work shall be satisfactorily completed. Based on the provisions of Article V, Section B.7.c, a variation of this condition may be authorized by the Commission, provided that public health and safety components of the project have been satisfactorily completed.
3. To help ensure effective long-term screening of the equipment compound area and compliance with regulatory provisions, the plans shall be revised to incorporate a staggered row of evergreen trees of mixed species between the Town Garage/Bicentennial Pond access road and the compound area. The size, type and location of this required evergreen screen shall be approved by the PZC officers, with staff assistance. With this revision, the proposed eight (8) foot high wooden fence around the compound, and the retention of existing wooded areas around the compound, the proposal will be acceptably screened. The compound and tower are not expected to be readily visible from Clover Mill Road or nearby residences along Clover Mill Road.
4. Whereas abandonment/tower removal issues are addressed by Town ownership and the Town's contract with TCP Communications, Inc., a separate bond pursuant to Article X, Section R.6 of the Zoning Regulations shall not be required.
5. This permit shall not become valid until the applicant obtains the permit form from the Planning Office and files it on the Land Records."

If there are any questions regarding this action, the Planning Office may be contacted.





59 Elm Street  
Suite 101  
New Haven, Connecticut 06510-2047

203 776 2277  
203 776 2288 fax  
www.dewberry.com

August 8, 2003

Mr. Romeo Ballesteros  
Bechtel Telecommunications  
210 Pomeroy Avenue, Suite 201  
Meriden, CT 06450

**Re: Site No. CT858C, 178-Foot Monopole  
230 Clover Mill Road, Storrs Mansfield, CT 06424  
Independent Structural Assessment**

Dear Sirs:

We have completed our structural assessment of the proposed monopole structure to be erected at the above referenced site, with respect to its capacity to support the proposed AT&T antennas and mounting hardware; pursuant to Section 108.1.1 of the Connecticut State Building Code (CSBC). We reviewed the monopole and foundations calculations dated June 6, 2003 prepared by Paul J. Ford and company for PennSummit Tubular, LLC. of West Hazelton, PA.

Section 1609.1 of the Connecticut State Building Code addresses radio and television towers and references Section 3108.4 of the 1996 BOCA Code. The Boca Code references EIA/TIA 222-E for antenna supporting structures. The calculations indicate that the design of the monopole and foundations is based on the later version of the code, TIA/EIA 222-F, and therefore also satisfies the EIA/TIA 222-E requirements.

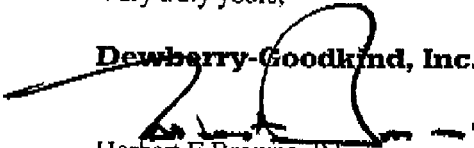
The proposed monopole is 178ft high and is designed to support 6 arrays of 12 panel antennas on 14ft wide, low profile platforms with 10ft vertical separation between elevations 128ft and 178ft above grade as well as 5 whip antennas and a lightning rod at the top of the pole. The design is based on the use of 4 generic Decibel Products DB896H panel antennas in each of 3 sectors per array. The wind area of each Decibel antenna is 6.3 sq. ft. the proposed AT&T installation will comprise of 6 Allgon antennas with 2.74 sq. ft. distributed in three sectors with 2 antennas per sector. The antennas will be mounted on stand-off T arms. By inspection the exposed wind area associated with the AT&T installation is almost 80% less than that assumed in the analysis. The structural design by Paul J. Ford is presented in spreadsheet format, the lateral wind loads and the gravity loads are calculated by the program in accordance with the requirements of TIA/EIA 222-F. These loads were used to determine the forces in the monopole sections and the reactions at the foundations. The footing is a 4ft deep, 30.5 ft. square concrete pad with 24 anchor bolts. Using the information published on the drawings and ignoring the reduced loading based on the actual AT&T antenna configuration, Dewberry confirmed that the stresses in the monopole, size and number of anchor bolts and foundation bearing pressure are acceptable. The structural design was determined to be in accordance with the requirements of EIA/TIA 222-E.

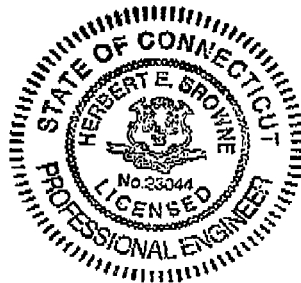
Upon review of the signed and sealed calculations submitted by PennSummit Tubular, LLC it is our conclusion that the monopole has ample capacity to support the proposed AT&T Wireless PCS, LLC antennas, coaxial cables and mounting hardware. The design is in compliance with the Connecticut State Building Code.

Should you have any questions, please do not hesitate to contact us.

Very truly yours,

**Dewberry-Goodkind, Inc.**

  
Herbert E. Browne, P.E.  
Director, Building Structures  
Dewberry-Goodkind, Inc.



IN PROJECT 324765 MONOPOLE STRUCTURE REVIEW.DOC



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## **RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility**

SITE ID: 907-007-858

April 7, 2003

**Prepared by AT&T Wireless Services, Inc.**  
Galen Belen RF Engineer

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## 1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 230 Clover Mill Road, Mansfield, CT 06268. This analysis uses site-specific engineering data to determine the predicted levels of radio frequency (RF) electromagnetic energy in the vicinity of the proposed facility and compares those levels with the Maximum Permissible Exposure (MPE) limits established by the Federal Communications Commission.

## 2. Site Data

Site Name: <b>Mansfield Ledgewood</b>	
Number of simultaneously operating channels	12
Type of antenna	Allgon 7250.03
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	168.00 feet
Antenna Aperture Length	5 feet

## 3. RF Exposure Prediction

The following equations established by the FCC, in conjunction with the site data, were used to determine the levels of RF electromagnetic energy present in the vicinity of the proposed facility<sup>1</sup>:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2) \quad Eq. 1-Far-field$$

Where,  $N$ = Number of channels,  $R$ = distance in cm from the antenna centerline, and  $EIRP(\theta)$  = The isotropic power expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBi, which is the usual case for the PCS bands.

$$PowerDensity = \frac{P_{in} / ch * N * 10^3}{2 * \pi * R * h * \alpha / 360} (mW/cm^2) \quad Eq. 2-Near-field$$

Where  $P_{in}/ch$  = Input power to antenna terminals in watts/ch,  $R$  = distance from the antenna centerline,  $h$  = aperture height in meters,  $\alpha$  = 3 dB beam-width of horizontal pattern.

<sup>1</sup> RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts ( $\mu$  W), a millionth of a watt, per square centimeter ( $cm^2$ ). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

#### 4. FCC Guidelines for Evaluating the Environmental Effects of RF Emissions

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by a Second Memorandum Opinion and Order. These new rules represent a consensus of the federal agencies responsible for the protection of public health and the environment, including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the National Institute for Occupational Health and Safety (NIOSH), and the Occupational Safety and Health Administration (OSHA).

Under the laws that govern the delivery of wireless communications services in the United States, as amended by the Telecommunications Act of 1996, the FCC has exclusive jurisdiction over RF emissions from personal wireless antenna facilities, which include cellular, PCS, messaging and aviation sites.<sup>2</sup> Pursuant to its authority under federal law, the FCC has established rules to regulate the safety of emissions from these facilities.

#### 5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.001938 mW/cm<sup>2</sup> which occurs at 300 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000078 mW/cm<sup>2</sup> at a distance of 4 feet. Table 1 below shows the Maximum Permissible Exposure (MPE) limits established by the FCC. There are different MPE limits for public/uncontrolled and occupational/controlled environments.

*Table 1: Maximum Permissible Exposure limits for RF Emissions*

<i>Frequency</i>	<i>Public/Uncontrolled</i>	<i>Occupational/controlled</i>	<i>Maximum power density at Accessible location</i>
Cellular	.580 mW/cm <sup>2</sup>	2.9 mW/cm <sup>2</sup>	0.001938 mW/cm <sup>2</sup>
PCS	1 mW/cm <sup>2</sup>	5 mW/cm <sup>2</sup>	

The maximum power density at the proposed facility represents only 0.92% of the public MPE limit for all frequencies in use.

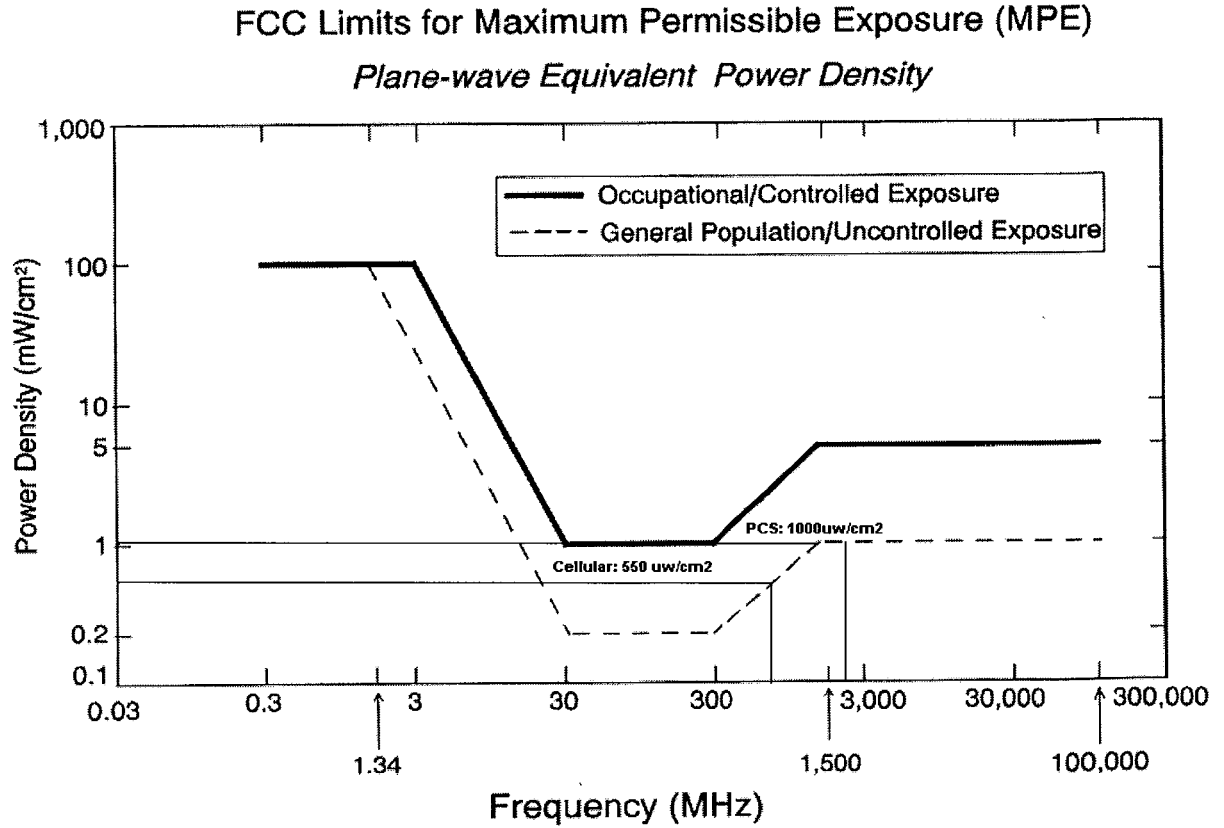
#### 6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.001938 mW/cm<sup>2</sup>, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

<sup>2</sup> 47 U.S. C. Section 332 ( c ) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission’s regulations concerning such emissions.”

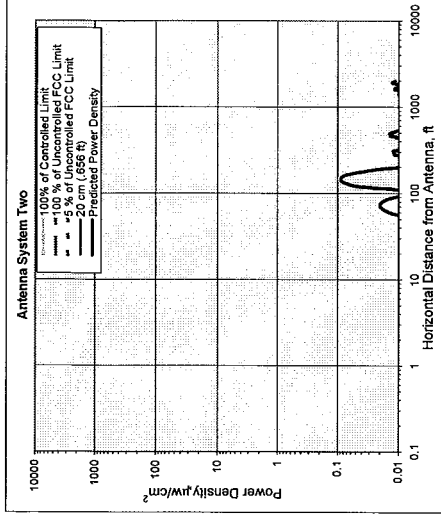
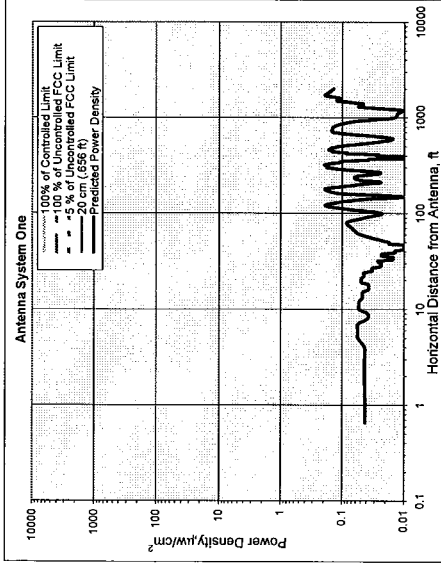
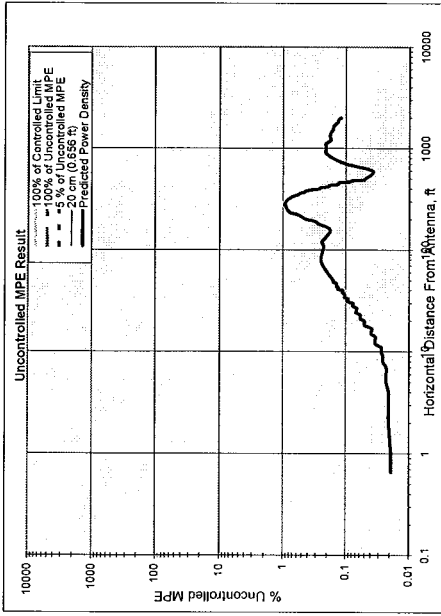


## 7. FCC Limits for Maximum Permissible Exposure



*AT&T Wireless Services, Inc.*

**8. Exhibit A**



Number of Antenna Systems: 8

Meets FCC Controlled Limits for The Antennas Systems.

Meets FCC Uncontrolled Limits for The Antenna Systems.

Meets 5% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Analysis Required.

Maximum Power Density =	mW/cm <sup>2</sup>	Power Density	@ Horiz. Dist.
108.34 times lower than the MPE limit for uncontrolled environment	0.001938	% of limit	feet
Composite Power (ERP) =	6.900.00	Watts	

Site ID: 907-007-858

Site Name: Mansfield Ledgewood

Site Location: 230 Clover Mill Road

Mansfield, CT 06268

Ant System ONE Owner: AT&T

Sector: 3

Azimuth: 90/210/330

Ant System TWO Owner: Fire Service & EMS

Sector: 1

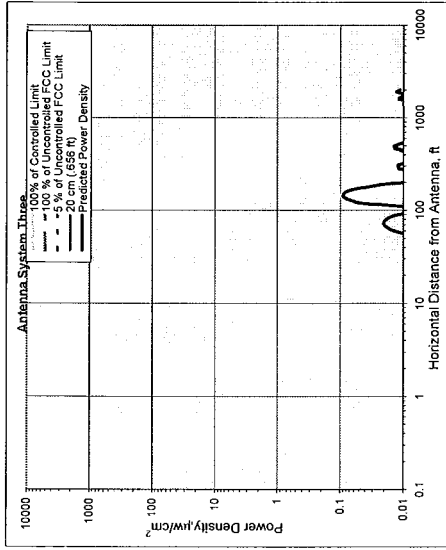
Azimuth 360

Antenna System One

Frequency	units	Value
Frequency	MHz	1945.00
# of Channels	#	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	5.86
Antenna Centerline	feet	168.00
Calculation Point	feet	6.00
(above ground or roof surface)		0.00
Antenna Model No.		Algon 7250.03
Max Ant Gain	dBd	16.30
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.11
Ant HBW	degrees	65.00
Distance to Ant bottom	feet	159.45
WOS?	Y/N?	n

Antenna System Two

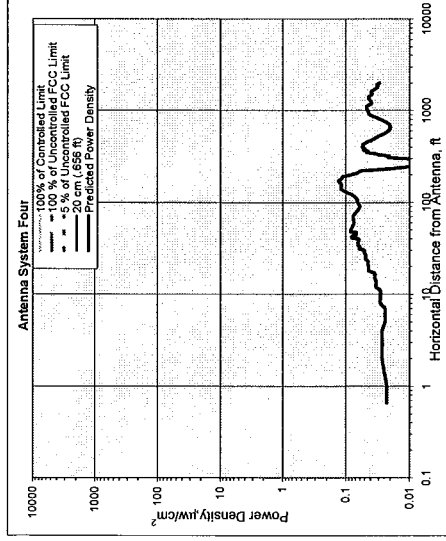
Frequency	units	Value
Frequency	MHz	420.00
# of Channels	#	1
Max ERP/Ch	Watts	500.00
Max Pwr/Ch Into Ant.	Watts	60.11
Antenna Centerline	feet	187.00
Calculation Point	feet	6.00
(above ground or roof surface)		0.00
Antenna Model No.		DB420
Max Ant Gain	dBd	9.20
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	18.00
Ant HBW	degrees	360.00
Distance to Ant bottom	feet	172.00
WOS?	Y/N?	n



Antenna System Three

Frequency	units	Value
Frequency	MHz	420.00
# of Channels	#	1
Max ERP/Ch	Watts	500.00
Max Pwr/Ch Into Ant.	Watts	60.11
Antenna Centerline	feet	187.00
Calculation Point (above ground or roof surface)	feet	6.00
Antenna Model No.		0.00
Max Ant Gain	dBd	D8420
Down tilt	degrees	9.20
Miscellaneous Att.	dB	0.00
Height of aperture	feet	18.00
Ant HBW	degrees	360.00
Distance to Ant. Bottom	feet	172.00
WOS?	Y/N?	n

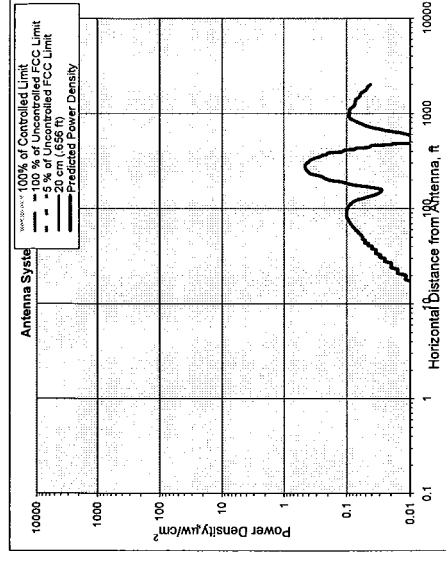
Ant System Three Owner: Fire Service & EMS  
 Sector: 1  
 Azimuth: 360



Antenna System Four

Frequency	units	Value
Frequency	MHz	152.00
# of Channels	#	1
Max ERP/Ch	Watts	500.00
Max Pwr/Ch Into Ant.	Watts	125.59
Antenna Centerline	feet	188.00
Calculation Point (above ground or roof surface)	feet	6.00
Antenna Model No.		0.00
Max Ant Gain	dBd	D8284
Down tilt	degrees	6.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	21.00
Ant HBW	degrees	360.00
Distance to Ant. Bottom	feet	171.50
WOS?	Y/N?	n

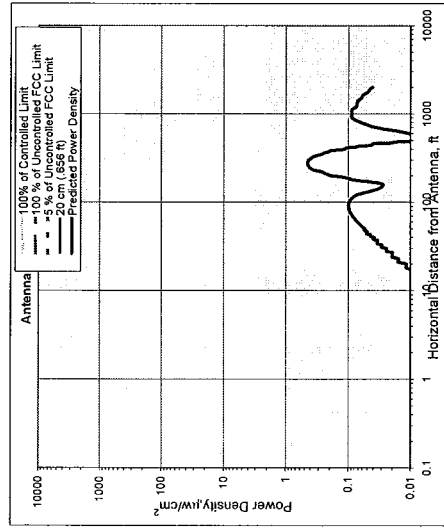
Ant System Four Owner: Fire Service & EMS  
 Sector: 1  
 Azimuth: 360



Antenna System Five

Frequency	units	Value
Frequency	MHz	153.00
# of Channels	#	1
Max ERP/Ch	Watts	500.00
Max Pwr/Ch Into Ant.	Watts	128.52
Antenna Centerline	feet	188.00
Calculation Point (above ground or roof surface)	feet	6.00
Antenna Model No.		0.00
Max Ant Gain	dBd	D8224
Down tilt	degrees	5.90
Miscellaneous Att.	dB	0.00
Height of aperture	feet	21.00
Ant HBW	degrees	360.00
Distance to Ant. Bottom	feet	171.50
WOS?	Y/N?	n

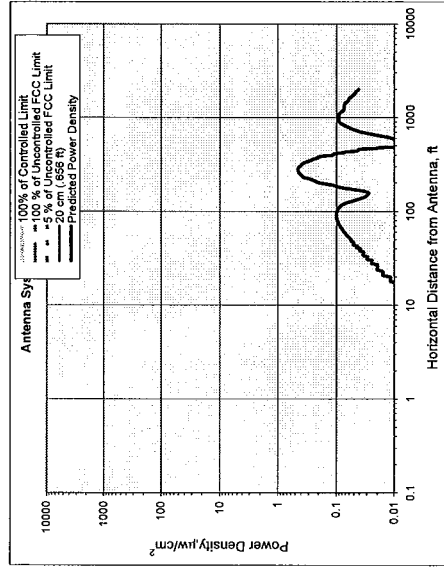
Ant System Five Owner: Emergency Management  
 Sector: 1  
 Azimuth: 360



Antenna System Six

Antenna	Frequency	Units	Value
	150.00	MHz	150.00
# of Channels		#	1
Max ERP/Ch		Watts	500.00
Max Pwr/Ch Into Ant.		Watts	128.52
Antenna Centerline		feet	188.00
Calculation Point		feet	6.00
(above ground or roof surface)		feet	0.00
Antenna Model No.			D8224
Max Ant Gain		dBd	5.90
Down tilt		degrees	0.00
Miscellaneous Att.		dB	0.00
Height of aperture		feet	21.00
Ant HBW		degrees	360.00
Distance to Ant <sub>Ref</sub>		feet	171.50
WOS?		Y/N?	n

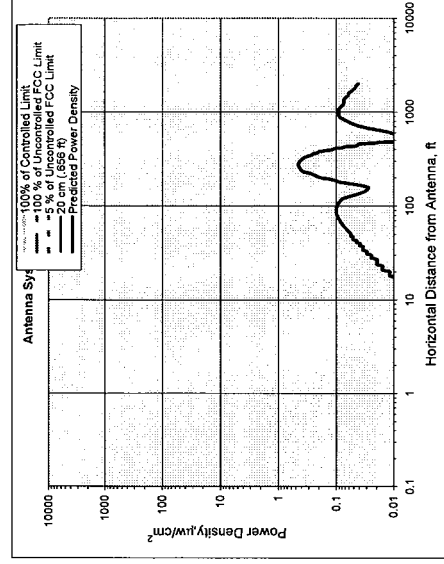
Ant System SIX Owner: Public Works  
Sector: 1  
Azimuth: 360



Antenna System Seven

Antenna	Frequency	Units	Value
	150.00	MHz	150.00
# of Channels		#	1
Max ERP/Ch		Watts	500.00
Max Pwr/Ch Into Ant.		Watts	128.52
Antenna Centerline		feet	188.00
Calculation Point		feet	6.00
(above ground or roof surface)		feet	0.00
Antenna Model No.			D8224
Max Ant Gain		dBd	5.90
Down tilt		degrees	0.00
Miscellaneous Att.		dB	0.00
Height of aperture		feet	21.00
Ant HBW		degrees	360.00
Distance to Ant <sub>Ref</sub>		feet	171.50
WOS?		Y/N?	n

Ant System SEVEN Owner: Fire Services & EMS  
Sector: 1  
Azimuth: 360



Antenna System Eight

Antenna	Frequency	Units	Value
	150.00	MHz	150.00
# of Channels		#	1
Max ERP/Ch		Watts	500.00
Max Pwr/Ch Into Ant.		Watts	128.52
Antenna Centerline		feet	188.00
Calculation Point		feet	6.00
(above ground or roof surface)		feet	0.00
Antenna Model No.			D8224
Max Ant Gain		dBd	5.90
Down tilt		degrees	0.00
Miscellaneous Att.		dB	0.00
Height of aperture		feet	21.00
Ant HBW		degrees	360.00
Distance to Ant <sub>Ref</sub>		feet	171.50
WOS?		Y/N?	n

Ant System Eight Owner: Fire Services & EMS  
Sector: 1  
Azimuth: 360



## 9. For Further Information

Additional information about the environmental impact of RF energy from personal wireless antenna facilities can be obtained from the Federal Communications Commission:

Dr. Robert Cleveland  
Federal Communications Commission  
Office of Engineering and Technology  
Washington, DC 20554

RF Safety Program: 202-418-2464  
Internet address: [rfsafety@fcc.gov](mailto:rfsafety@fcc.gov)  
RF Safety Web Site: [www.fcc.gov/oet/rfsafety](http://www.fcc.gov/oet/rfsafety)

## 10. References

- [1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).
- [2] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Notice of Proposed Rulemaking, ET Docket 93-62, 8 FCC Rcd 2849 (1993).
- [3] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Report and Order, ET Docket 93-62, FCC 96-326, adopted August 1, 1996. 61 Federal Register 41006 (1996).
- [4] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Second Memorandum Opinion and Order, ET Docket 93-62, adopted August 25, 1997.
- [5] *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields*, OET Bulletin 65, August, 1997.